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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,880	09/22/2003	Tatsuya Kobayashi	00684.003517	4251

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EXAMINER

CHEN, SOPHIA S

ART UNIT PAPER NUMBER

2852

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/664,880

Applicant(s)

KOBAYASHI ET AL.

Examiner

Sophia S. Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6 and 10-14 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 10-14 is/are allowed.
6) ☒ Claim(s) 1 and 3-6 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 14 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The replacement sheet filed 1/14/05 has been approved.

Specification

2. The disclosure is objected to because of the following informality: Page 6, first paragraph, line 4 of the amendment filed 1/14/05, "10°C10% Rh" should be "10°C15% Rh" to be consistent with Figure 5(a).

Claim Rejections – 35 U.S.C. §102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3, 5, and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Katayanagi et al. (US Pat. No. 6,529,695 B2, cited in previous Form PTO-892)

The patent discloses an image forming apparatus comprising: a first image bearing member 2Y, 2M, 2C, or 2K for bearing a toner image; a second image bearing member 15 for bearing the toner image; a transfer member 6 opposed to the first image bearing member 2Y, 2M, 2C, or 2K with the second image bearing member 15 therebetween, wherein a voltage is applied to the transfer member 6 to transfer the toner image from the first image bearing member 2Y, 2M, 2C, or 2K onto the second

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image bearing member 15 (column 4, line 63 to column 5, line 7; Figure 1), and wherein a resistance R_t (10^5 to $10^9 \Omega\text{cm}$; column 5, lines 8-18) of the transfer member 6 and a resistance R_b (10^6 to $10^{12} \Omega\text{cm}$; column 4, lines 40-42) of the second image bearing member 15 satisfy $R_t / R_b \geq 1.0$.

The patent further discloses the transfer member 6 and the second image bearing member 15 having ionic electroconductivities (column 4, lines 42-48 and column 5, lines 8-18); the first image bearing member 2Y, 2M, 2C, or 2K being a photosensitive member (column 3, line 57); and the second image bearing member 15 being an intermediate transfer member (belt; column 4, lines 20-21).

Claim Rejections – 35 U.S.C. §103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katayanagi et al. in view of Masuda et al. (US Pat. No. 6,175,712 B1)

Katayanagi et al., as discussed above, differs from the instant claimed invention in not disclosing the transfer member and the image bearing member having electronic electroconductivities.

Masuda et al. discloses an image bearing apparatus comprising a first image bearing member (a photosensitive drum) 1; a second image bearing member (an intermediate transfer belt) 20b; a transfer roller 25 opposed to the image bearing member 1 with the second image bearing member 20b therebetween (Figure 2); and either ionic or electronic electroconductivities being added to an elastic layer (column 8, lines 42-46).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the elastic layer having electronic electroconductivities as taught by Masuda et al. in place of the transfer member and the second image bearing member having ionic electroconductivities of Katayanagi et al. because of the same functionality for adding conductivity to the elastic member.

Allowable Subject Matter

7. Claims 10-14 are allowed.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Response to Arguments

9. Applicant's arguments filed 1/14/05 have been fully considered but they are not persuasive.

Applicants state that Katayanagi et al. merely discloses preferable ranges of volume resistivities of a transfer roller and an intermediate transfer member. Applicants argue that Katayanagi et al. does not disclose or suggest any relationship between the resistance of transfer roller and the resistance of an intermediate transfer member. A *fortiori* Katayanagi et al. does not disclose or suggest that a ratio of a resistance R_t of a transfer member and resistance R_b of a second image bearing member is less than or equal to 1.


The examiner does not agree with the above arguments. Even though Katayanagi et al. merely disclose preferable ranges of volume resistivities (resistance per unit volume) of the transfer roller 6 (10^5 to 10^9 Ohm.cm) and the intermediate transfer member 15 (10^6 to 10^{12} Ohm.cm), the possible ratios of the resistance R_t of the transfer member and resistance R_b of the second image bearing member are: 10^{-7} (10^5 for the transfer roller and 10^{12} for the intermediate transfer member) $\leq R_t/R_b \leq 10^3$ (10^9 for the transfer roller and 10^6 for the intermediate transfer member). Apparently, " $R_t/R_b \leq 1$ " is within the above possible ratios. Therefore, Katayanagi et al. does suggest the ratio of the resistance R_t of the transfer member and resistance R_b of the second image bearing member is less than or equal to 1.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sophia S. Chen whose telephone number is (571) 272-2133. The examiner can normally be reached on M-F (7:00-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sophia S. Chen
Primary Examiner
Art Unit 2852

Ssc
March 7, 2005